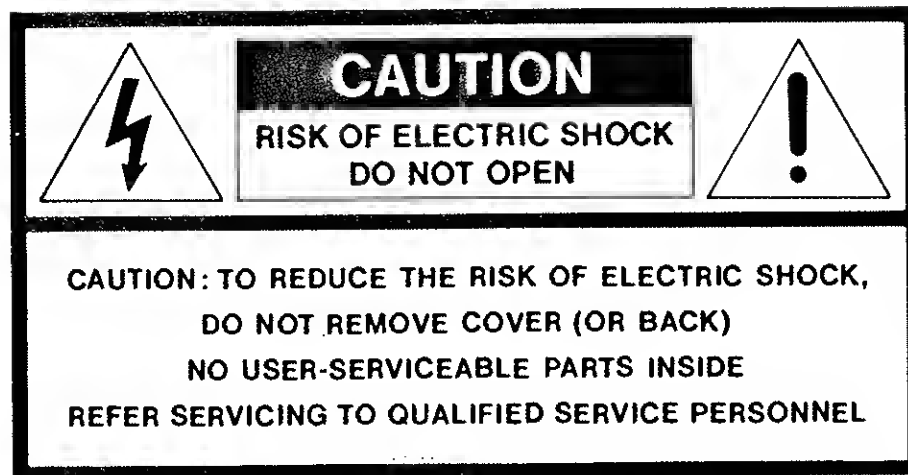


# **marantz®**

## **Model MA500 User Guide**

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**Mono Amplifier**



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

## **WARNING**

**TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK,  
DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**

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**CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE  
OF PLUG TO WIDE SLOT, FULLY INSERT.**

**ATTENTION: POUR ÉVITER LES CHOCs ÉLECTRIQUES, INTRODUIRE  
LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPON-  
DANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.**

## **SAFETY INSTRUCTIONS**

### **READ BEFORE OPERATING EQUIPMENT**

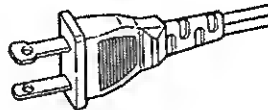
This product was designed and manufactured to meet strict quality and safety standards. There are, however, some installation and operation precautions which you should be particularly aware of.

1. Read Instructions — All the safety and operating instructions should be read before the appliance is operated.
2. Retain Instructions — The safety and operating instructions should be retained for future reference.
3. Heed Warnings — All warnings on the appliance and in the operating instructions should be adhered to.
4. Follow Instructions — All operating and use instructions should be followed.
5. Water and Moisture — The appliance should not be used near water — for example, near a bathtub, wash-bowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.
6. Carts and Stands — The appliance should be used only with a cart or stand that is recommended by the manufacturer.
7. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



8. Wall or Ceiling Mounting — The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
9. Ventilation — The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
10. Heat — The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
11. Power Sources — The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

12. Grounding or Polarization — Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.

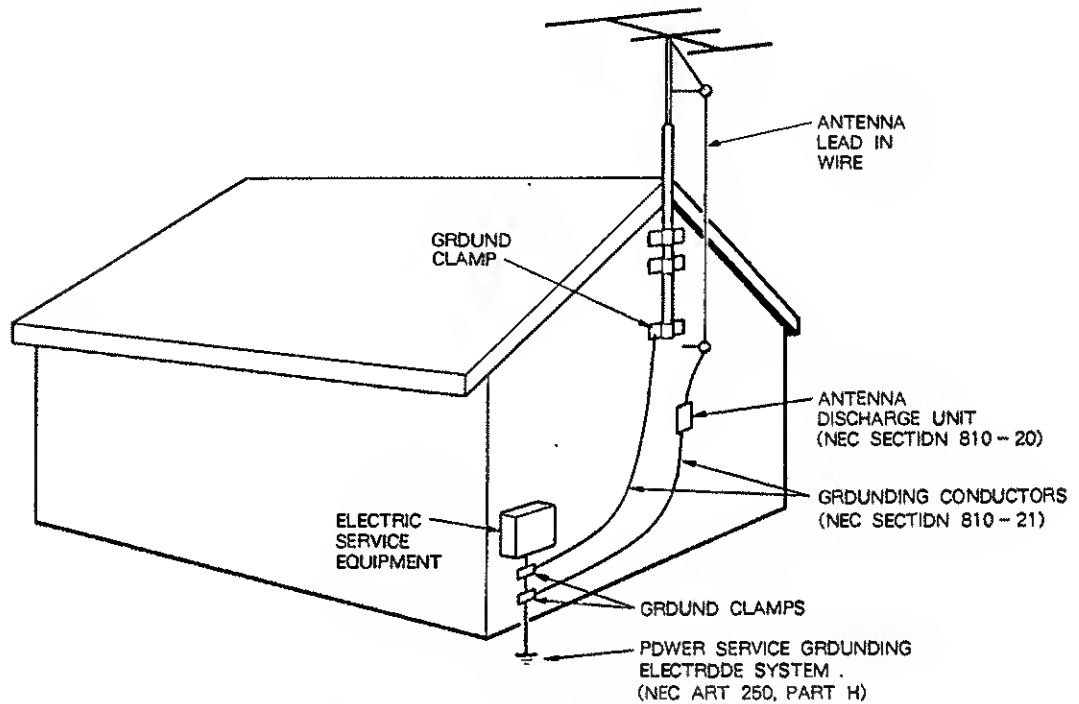


**AC POLARIZED PLUG**

13. Power-Cord Protection — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
14. Cleaning — The appliance should be cleaned only as recommended by the manufacturer.
15. Power Lines — An outdoor antenna should be located away from power lines.
16. Outdoor Antenna Grounding — If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Fig. 1.
17. Nonuse Periods — The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
18. Object and Liquid Entry — Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
19. Damage Requiring Service — The appliance should be serviced by qualified service personnel when:
  - A. The power-supply cord or the plug has been damaged; or
  - B. Objects have fallen, or liquid has spilled into the appliance; or
  - C. The appliance has been exposed to rain; or
  - D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
  - E. The appliance has been dropped, or the enclosure damaged.
20. Servicing — The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

FIG. 1

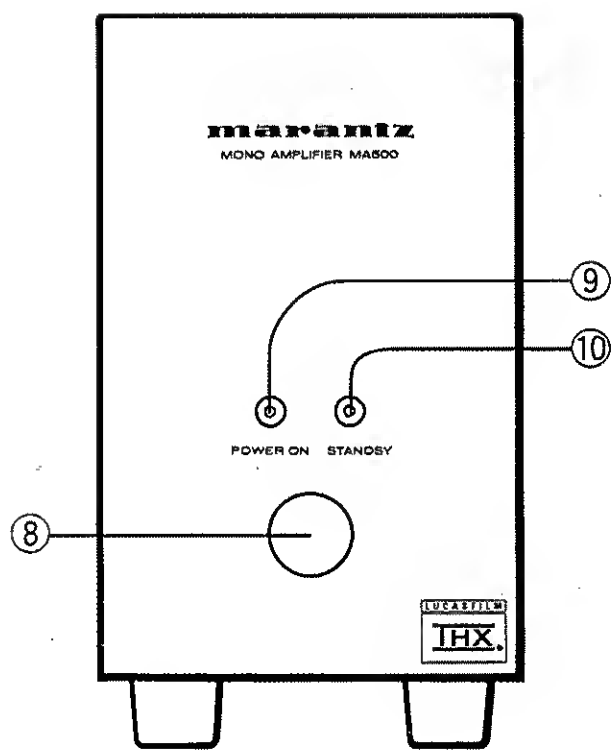
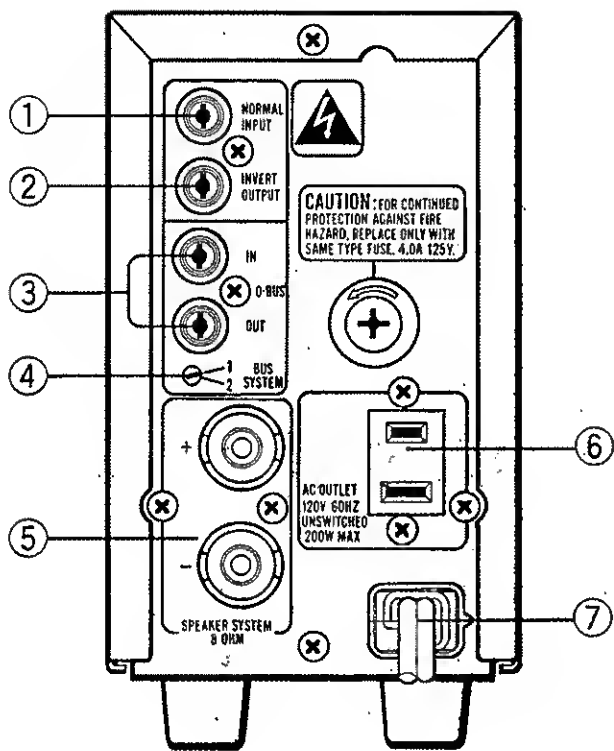
EXAMPLE OF ANTENNA GROUNDING ACCORDING TO  
NATIONAL ELECTRICAL CODE INSTRUCTIONS  
CONTAINED IN ARTICLE 810 - "RADIO AND TELEVISION EQUIPMENT"



NEC - NATIONAL ELECTRICAL CODE

**NOTE TO CATV SYSTEM INSTALLER:**

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.



## ENGLISH

### 1. INTRODUCTION

Thank you for purchasing the Marantz MA500 power amplifier for your sound system. Please take a few minutes to read this manual thoroughly, before you attempt connections and operation.

The Marantz MA500 is a monophonic (single channel) amplifier, that is designed for home theater and high quality audio systems.

### 2. FEATURES

- **High power output, rated at 125 watts into 8Ω, and 180 watts into 4Ω.**
- **High current discrete power transistors in the output stage.**
- **Extensive heat sinks for reliable operation and long life.**
- **Narrow width chassis is designed for convenient shelf or system rack mounting in the space of one stereo component. 5 MA500 units placed side by side occupy the same dimension width as other Marantz components, such as the AV500 A/V Digital Dolby Pro-Logic surround sound preamplifier.**
- **Bridge mode capability allows the use of two MA500 units connected together to form one very high power amplifier channel, providing 450 watts into 8Ω.**
- **Remote control input and output jacks, compatible with other Marantz D-Bus/RC-5 remote controlled components. This permits remote power switch-on and switch-off by the main system component (such as the Marantz AV500).**

#### • **NOTE on loudspeaker impedance:**

The power ratings for the Marantz MA500 power amplifier are obtained using fixed value test load impedances and high intensity sine wave test tones. However, the actual impedance of a loudspeaker will vary with frequency, deviating somewhat from the loudspeaker manufacturer's nominal impedance rating. This Marantz amplifier has been specially designed to drive any modern loudspeaker system with a rated impedance of 4 ohms or higher. A few newer loud-speaker systems feature nominal impedances of less than 4 ohms. The high current output capability of the Marantz MA500 amplifier can provide the additional power necessary to drive low impedance speaker systems. However, during extended passages of high volume, the protection circuitry may temporarily interrupt operation. If this occurs, simply reduce the volume accordingly. The protection circuitry is specially designed so that it cannot affect the sound quality during normal operation.

### 3. FUNCTION AND OPERATION

#### ① **NORMAL INPUT jack**

Connect to the preamplifier output.

#### ② **INVERT OUTPUT jack**

This jack is for output of signal which was inverted from the normal input signal.

#### ③ **REMOTE INPUT / OUTPUT JACKS**

If you are using a Marantz remote-controlled component, such as an A/V pre-amplifier or surround sound receiver with pre-amp outputs, these jacks allow the MA500 to be controlled remotely, for power on/off. Check the owner's manual for your Marantz A/V pre-amplifier to confirm that it is remote-control compatible. The remote control jacks on your Marantz A/V pre-amplifier are color-coded orange.

#### ④ **BUS SYSTEM selector switch**

Newly Introduced Marantz remote-controlled pre-amplifiers and receivers use either of two types of remote-controlled turn-on and turn-off codes:

- Marantz A/V pre-amplifier models, such as the AV500, use a single button on the supplied remote control to turn the AV500 power on and off. If you are using 1 or more MA500 amplifiers with the Marantz AV500, set this switch to the SYSTEM 1 setting.
- Other Marantz remote controlled components, such as the SR-92 and SR-82 receivers, and the SC-80 stereo pre-amplifier are supplied with remote controls that have individual buttons, one for the power off function and one or more system function selector buttons for the power on function. The button used for power off is labeled "STANDBY" on the main component's remote. If you are using 1 or more MA500 power amplifiers with a Marantz receiver or stereo pre-amp, set this switch to the SYSTEM 2 setting.

Proper setting of this switch, according to the Marantz model of A/V pre-amp or receiver will permit correct synchronized full system power on/off capabilities.

#### ⑤ **SPEAKER SYSTEM terminals**

For connection to the speaker cables. Be sure to observe the correct polarities for proper speaker system phasing – ( + ) and ( – ) terminals of the amplifier connected to the ( + ) and ( – ) terminals of the speaker.

#### ⑥ **AC OUTLET**

Supplies power regardless of the POWER ON/STANDBY switch setting. Make sure that power consumption of connected equipment does not exceed 200 watts.

## ⑦ POWER CABLE

Plug into a household AC power outlet. To connect a number of MA500 amplifiers to the same outlet, you are advised to use a UL-listed AC power outlet strip that is rated for 15 amperes, and be sure that you do not connect other appliances (such as air conditioners, heaters, etc.) to the same AC outlet.

## ⑧ POWER ON/STANDBY switch

Press this switch to turn the power of the unit ON. Press it again to turn the unit OFF.

When the D-BUS connector is connected to another component, power to the unit can be turned ON/OFF by remote control from the component. To turn the power ON/OFF by remote control, leave this switch at the ON position.

## ⑨ POWER ON indicator

This indicator lights when the power is ON.

## ⑩ STANDBY indicator

This Indicator lights when the power of the unit is put into Standby mode (power OFF) by remote control.

### Notes:

- Power empliers normally generate some heat during operation. The MA500 features extensive Internal heat sinks to protect against over-temperature conditions. Even during very low volume operation, some heat will be generated, which is normal.

It is advisable to install the MA500 unit(s) in a manner that allows the free flow of air around the unit(s). If the MA500 units are mounted in an enclosed cabinet or audio system rack, take care that ventilation to this unit is not blocked.

- The MA500 is not provided with an input volume control. Therefore, be sure to make all connections before turning the power ON. Also carefully read the user guide of the pre-amplifier or other component connected to the unit.

## 4. CARE AND MAINTENANCE

This section describes the care and maintenance tasks that must be performed to optimize the operation of your Marantz equipment.

### CLEANING OF EQUIPMENT EXTERNAL SURFACES

The exterior finish of your unit will last indefinitely with proper care and cleaning. Never use scouring pads, steel wool, scouring powders or harsh chemical agents (e.g., lye solution), alcohol, thinners, benzene, insecticide or other volatile substances as these will mar the finish of the equipment. Likewise, never use cloths containing chemical substances. If the equipment gets dirty, wipe the external surfaces with a soft, lint-free cloth.

If the equipment becomes heavily soiled:

- dilute some washing up liquid in water, in a ratio of one part detergent to six parts water.
- dip a soft, lint free cloth in the solution and wring the cloth out until it is damp.
- wipe the equipment with the damp cloth.
- dry the equipment by wiping it with a dry cloth.

## 5. REPAIRS

Only the most competent and qualified technicians should be allowed to service your unit. Marantz and its factory trained warranty station personnel have the knowledge and special equipment needed for repair and calibration of this precision instrument.

In the event of difficulty, call the toll-free telephone number listed on the face of the warranty to obtain the name and address of the Marantz Authorized Service Center nearest you. In many cases, the dealer where you purchased your Marantz unit may be equipped to provide service. Please include the model, serial number of your unit together with a copy of your purchase receipt and a full description of what you feel is abnormal in its behavior.

## 6. TROUBLESHOOTING

**The amplifier does not operate and the POWER ON indicator does not light.**

- Is the power cable plugged in properly to the AC power outlet?

**The POWER ON indicator lights, but the amplifier does not function.**

- Are speaker cables end input cables connected properly?

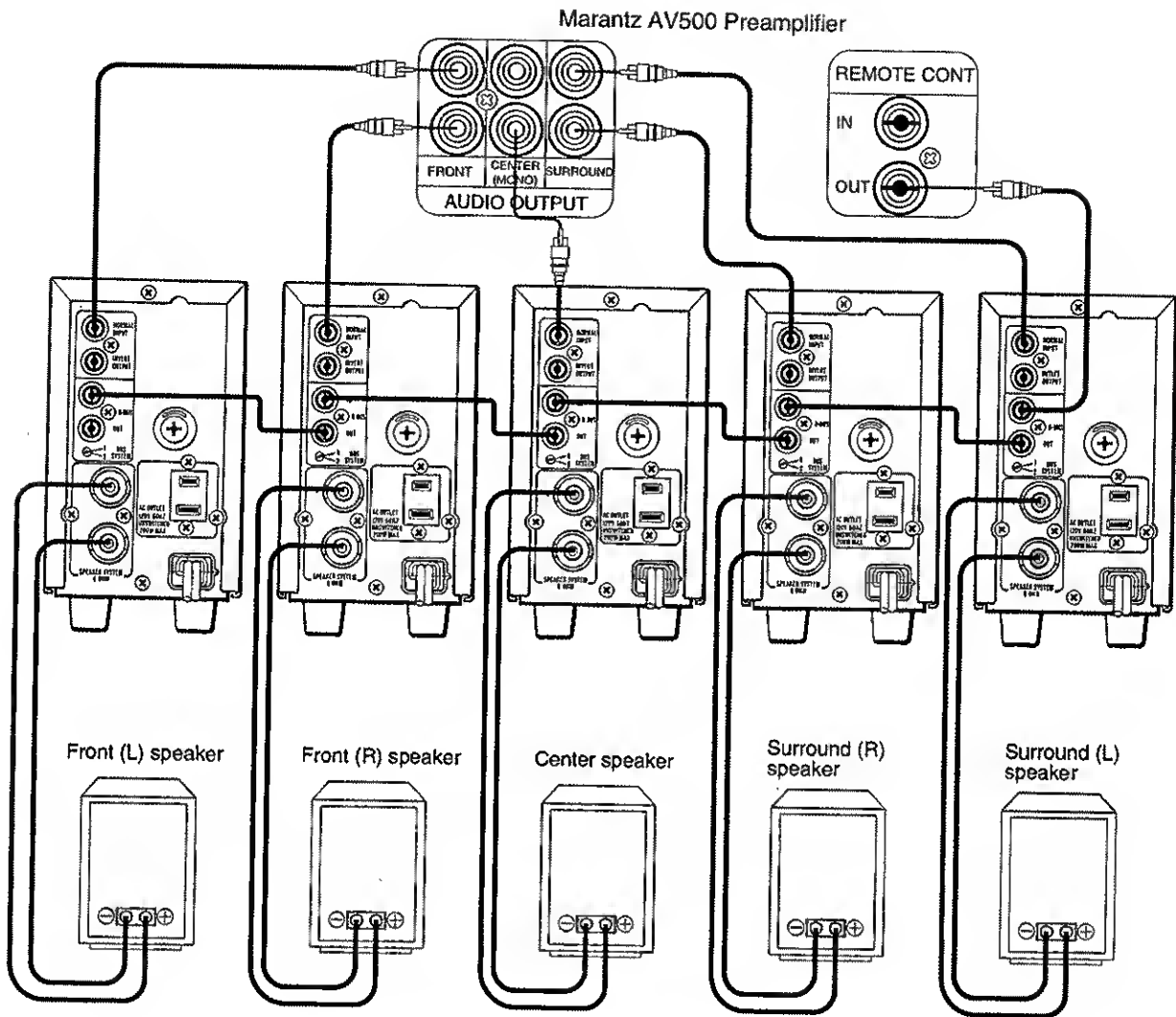
## 7. TECHNICAL SPECIFICATIONS

Rated Power Output .....	125 Watts into 8 $\Omega$ RMS
	180 Watts into 4 $\Omega$ RMS
Total Harmonic Distortion .....	<0.05% at 8 $\Omega$
	<0.09% at 4 $\Omega$
Input Sensitivity/Input Impedance .....	1 V RMS/30 k $\Omega$
Frequency Response .....	10 to 100 kHz
	(-1 dB at 1 Watt)
Signal to noise ratio (A-weighted) .....	>116 dB
Damping Factor (at 8 $\Omega$ ) .....	200
Power Requirement .....	120 V AC, 60 Hz
Power Consumption	
(full rated output into 8 $\Omega$ ) .....	230 Watts
Dimensions	
Width .....	3-5/16 inches (84 mm)
Height .....	5-3/16 inches (132 mm)
Depth .....	17-3/4 inches (450 mm)
Weight .....	13.2 lbs (6.0 kg)
Accessories .....	Remote control cable x 1

Design and specifications subject to change without notice.

## 8. CONNECTIONS

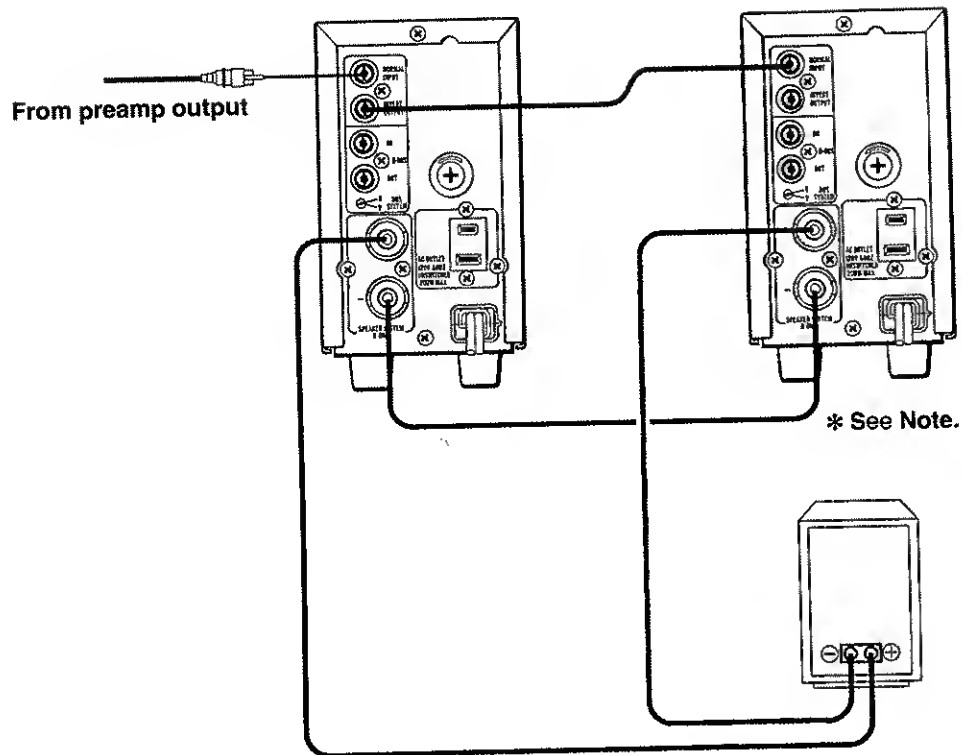
### Connection for a 5-channel system



- Use speakers with impedances from 8 to 16 ohms.
- Connection to the D-BUS connectors is not necessary if the remote control function is not to be used.



## BTL connection combining 2 units



- Use a speaker an with impedance from 8 to 16 ohms.

### <Note>

When two of these units are used in BTL connection, be sure to connect a cable between the "-" speaker terminals. (The cable is not provided with the unit.)